



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/055,366	01/25/2002	Gerard Malle	2350-94	7627

23117 7590 05/19/2004

NIXON & VANDERHYE, PC  
1100 N GLEBE ROAD  
8TH FLOOR  
ARLINGTON, VA 22201-4714

EXAMINER

TRAN, SUSAN T

ART UNIT	PAPER NUMBER
----------	--------------

1615

DATE MAILED: 05/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/055,366

Applicant(s)

MALLE ET AL.

Examiner

Susan T. Tran

Art Unit

1615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 40-76 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 40-76 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

Art Unit: 1615

### **DETAILED ACTION**

Prosecution on the merits of this application is reopened on claims 40-76 considered unpatentable for the reasons indicated below:

It was pointed out by the QA that the independent claim does not appear to be patentable on its face. It appears to read on giving a light relaxing/bleaching treatment to hair, followed by virtually any known hair treatment such as coloring, perming, and etc....Additionally, there are enablement issues, assuming that one of ordinary skill in the art is a hairdresser, how are they to determine that "said reducing generates 0.1% to 5% by weight of cysteine with respect to the total amino acids" of the hair and determine that the reactive sites are generated "only on the surface of said fibres to a depth of less than 10  $\mu\text{m}$ ". And, as well as people have different thickness and amounts of hair to begin with.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 40-70 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Art Unit: 1615

The factors to be considered in determining whether a disclosure meets the enablement requirement of 35 U.S.C. 112, first paragraph, have been described in *In re Wands*, 8 USPQ2d 1400 (Fed. Cir. 1988). Among these factors are : (1) the nature of the invention; (2) the state of the prior art; (3) the relative skill of those in the art; (4) the predictability or unpredictability of the art; (5) the breadth of the claims; (6) the amount of direction or guidance presented; (7) the presence or absence of working examples; and (8) the quantity of experimentation necessary. When the above factors are weighed, it is the examiner's position that one skilled in the art could not practice the invention without undue experimentation. How can one of ordinary skill in the art determine that the reducing agent is to generate 0.1% to 5% by weight of cysteine with respect to the total amino acids of the hair and determine that the reactive sites are generated only on the surface of said fibres to a depth of less than 10  $\mu\text{m}$ , without undue experiment?

(1) The nature of the invention:

The invention provides method for treating keratinous hair by reducing the disulphide bonds of the hair for generating reactive sites only on the surface of the hair with a reducing agent and covalently fixing at least one active compound with the reducing agent.

(2) The state of the prior art:

The art does not teach the use of reducing agent to break the disulfide bonds only on the surface of the hair.

(3) The relative skill of those in the art:

Art Unit: 1615

The relative skill of those in the art is professional

(4) The predictability or unpredictability of the art:

The unpredictability of the art is high.

(5) the breadth of the claims:

The claims are very broad. It reads on giving a light relaxing/bleaching treatment to hair, followed by virtually any known hair treatment such as coloring or perming.

(6) The amount of direction or guidance presented:

The claims do not give direction or guidance as to how those of ordinary skill in the art can determine that the reducing generates 0.1% to 5% by weight of cysteine with respect to the total amino acids of the hair and determine that the reactive sites are generated only on the surface of said fibres to a depth of less than 10  $\mu\text{m}$ .

(7) The presence or absence of working examples

The specification does not provide any example showing the reducing agent generates 0.1% to 5% by weight of cysteine with respect to the total amino acids of the hair and the surface of the reactive sites having a depth of less than 10  $\mu\text{m}$ .

(8) The quantity of experimentation necessary

Since there are no guidance as to how the dept of the surface of the reactive sites cannot be determine, it would take undue experimentation to study and when the above factors are weighed together, one of ordinary skill in the art would be burdened with undue experimentation to determine the dept of the surface of the hair is less than 10  $\mu\text{m}$ .

Art Unit: 1615

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 40-76 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 40 is rejected in the use of the phrase "novel appropriate properties" in line 2. It is unclear what the phrase means. Further clarification is suggested.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 40-48 and 55-73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cunningham et al. 3,892,845.

Cunningham teaches a method for adjusting hair comprising applying to the hair combination of keratin disulfide reducing agent and dye reducing agent (column 2, lines 18-66). The time of application ranges from about 15 minutes to 1 hour (column 3, lines 1-20).

Cunningham does not teach the reactive of disulphide bonds on the surface of the fiber to a depth of less than 10  $\mu\text{m}$ . However, since Cunningham uses the same keratin disulfide reducing agent and the same application time to obtain the desired hair

Art Unit: 1615

color shade without impairing the mechanical properties of the hair (column 1, lines 45-50), it is the position of the examiner that said limitation is clearly inherent. Thus, it would have been obvious for one of ordinary skill in this art to, by routine experimentation optimize Cunningham's composition with the expectation of at least similar result, because Cunningham teaches a method for fixing hair using the same materials and conditions.

Regarding to the limitation "said reducing generates 0.1% to 5% by weight of cysteine with respect to the total amino acids of the keratinous hair fibres", the burden is shifted to the applicant to establish that the hair composition of Cunningham does not exhibit similar properties since Cunningham teaches the use of the same keratin disulfide reducing agent and the same application time to obtain the desired hair color shade without impairing the mechanical properties of the hair (column 1, lines 45-50).

Claims 74-76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cunningham et al., in view of Bailey et al. WO 96/03966.

Cunningham is relied upon for the reason stated above. The reference is silent as to the specific active compound.

Bailey teaches method for styling hair comprising applying to the hair composition comprises reducing agent and hydrophobic groups compound (pages 3-4, and 6). Thus, it would have been obvious for one of ordinary skill to combine Cunningham's composition with the hydrophobic compounds of Bailey, because the

Art Unit: 1615

references teach the advantageous results in combining reducing agent and active agent such as hydrophobic compound to treat hair fibers.

Claims 49-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cunningham et al., in view of Shimura et al. EP 0 331 750.

Cunningham is relied upon for the reasons stated above. The reference is silent as to the teaching of the phosphine formula recited in claim 8. However, Cunningham teaches the exact same phosphine compound recited in claims 9 and 10, e.g., tris-(hydroxyalkyl) phosphine.

Shimura teaches a method for treating hair fibers comprising applying to the hair composition comprising hydroxyalkylphosphine compound having formula (1), other additives, and pH adjusting agent to obtain pH ranges from 3-7 (pages 3-4). Hence, it would have been obvious for one of ordinary skill to modify Cunningham's composition using the hydroxyalkylphosphine compound in view of the teachings of Shimura, because the references teach the advantageous results in the use of hydroxyalkylphosphine compound for the same purpose, e.g., treating hair fibers.

### ***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan T. Tran whose telephone number is (571) 272-0606. The examiner can normally be reached on M-R from 6:00 am to 4:30 pm.



Art Unit: 1615

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman K. Page, can be reached at (571) 272-0602. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
THURMAN K. PAGE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1600